



AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 9, line 12, with the following amended paragraph:

Generally, the present invention provides a manner of optimizing transport layer performance over links exhibiting bit errors, and particularly links exhibiting relatively high bit error rates such as wireless links. Packet loss due to bit errors are distinguished from packet loss due to congestion loss (e.g., buffer overflows), and an efficient and secure manner of recovering from losses due to bit errors is provided. In one embodiment of the invention, a signal is provided to a TCP sender regarding packet loss due to bit errors. Because such signals may be sent from any number of network elements in the network, they may be untrustworthy, and the signals provided to the TCP sender are used to “advise” the TCP sender of the bit error packet loss condition. Using this advice, the TCP sender uses its own loss detection mechanism to confirm that certain packets have been lost. Where a TCP sender confirms such advice in this manner, the TCP sender may alter its response accordingly. A number of advantages are provided using such a methodology, such as an improvement of the throughput of TCP connections (particularly on relatively high bit error links), security against malicious attacks, and the ability to use a single signaling protocol for all transport layer protocols that can use this signal. Further, such a methodology works with IPsec and does not require ~~[[placket]]~~packet snooping in the network.